



DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co., Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Rita #1-18

18-13s-18w Ellis,KS

Start Date: 2012.05.08 @ 10:58:30

End Date: 2012.05.08 @ 16:33:30

Job Ticket #: 47227 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.05.15 @ 08:59:01



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47227

DST#: 1

ATTN: Marc Dow ning

Test Start: 2012.05.08 @ 10:58:30

GENERAL INFORMATION:

Formation: **LKC "C&D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:35:20

Time Test Ended: 16:33:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: 3488.00 ft (KB) To 3536.00 ft (KB) (TVD)

Reference Elevations: 2139.00 ft (KB)

Total Depth: 3536.00 ft (KB) (TVD)

2131.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8354 Inside

Press @RunDepth: 32.04 psig @ 3527.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.05.08 End Date: 2012.05.08

Last Calib.: 2012.05.08

Start Time: 11:08:30 End Time: 16:33:30

Time On Btm: 2012.05.08 @ 12:35:00

Time Off Btm: 2012.05.08 @ 15:09:30

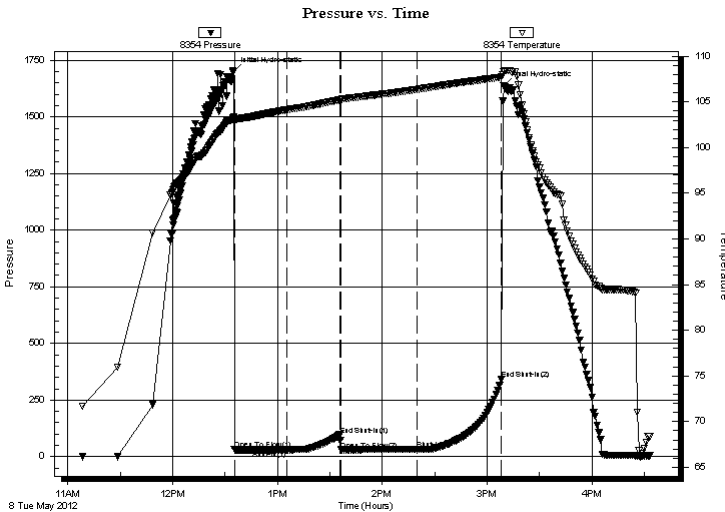
TEST COMMENT: IF-Weak surface blow @ 18 minutes. Built to 1&1/2 inches.

ISI-No Return

FF-Weak building blow . Built to 8 inches.

FSI-No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1700.70	103.32	Initial Hydro-static
1	33.59	102.91	Open To Flow (1)
31	29.22	104.15	Shut-In(1)
61	96.40	105.24	End Shut-In(1)
62	29.34	105.27	Open To Flow (2)
105	32.04	106.38	Shut-In(2)
153	340.39	107.72	End Shut-In(2)
155	1638.52	108.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	15%Oil/85%Mud	0.42
0.00	93' G.I.P.	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47227

DST#: 1

ATTN: Marc Dow ning

Test Start: 2012.05.08 @ 10:58:30

Tool Information

Drill Pipe:	Length: 3486.00 ft	Diameter: 3.80 inches	Volume: 48.90 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 26000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 20000.00 lb
			<u>Total Volume: 48.90 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	3488.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	48.00 ft			
Tool Length:	68.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3469.00	
Shut In Tool	5.00			3474.00	
Hydraulic tool	5.00			3479.00	
Packer	5.00			3484.00	20.00 Bottom Of Top Packer
Packer	4.00			3488.00	
Stubb	1.00			3489.00	
Perforations	5.00			3494.00	
Change Over Sub	1.00			3495.00	
Drill Pipe	31.00			3526.00	
Change Over Sub	1.00			3527.00	
Recorder	0.00	8354	Inside	3527.00	
Recorder	0.00	8520	Outside	3527.00	
Perforations	6.00			3533.00	
Bullnose	3.00			3536.00	48.00 Bottom Packers & Anchor

Total Tool Length: 68.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47227

DST#: 1

ATTN: Marc Dow ning

Test Start: 2012.05.08 @ 10:58:30

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.75 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
30.00	15%Oil/85%Mud	0.421
0.00	93' G.I.P.	0.000

Total Length: 30.00 ft Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

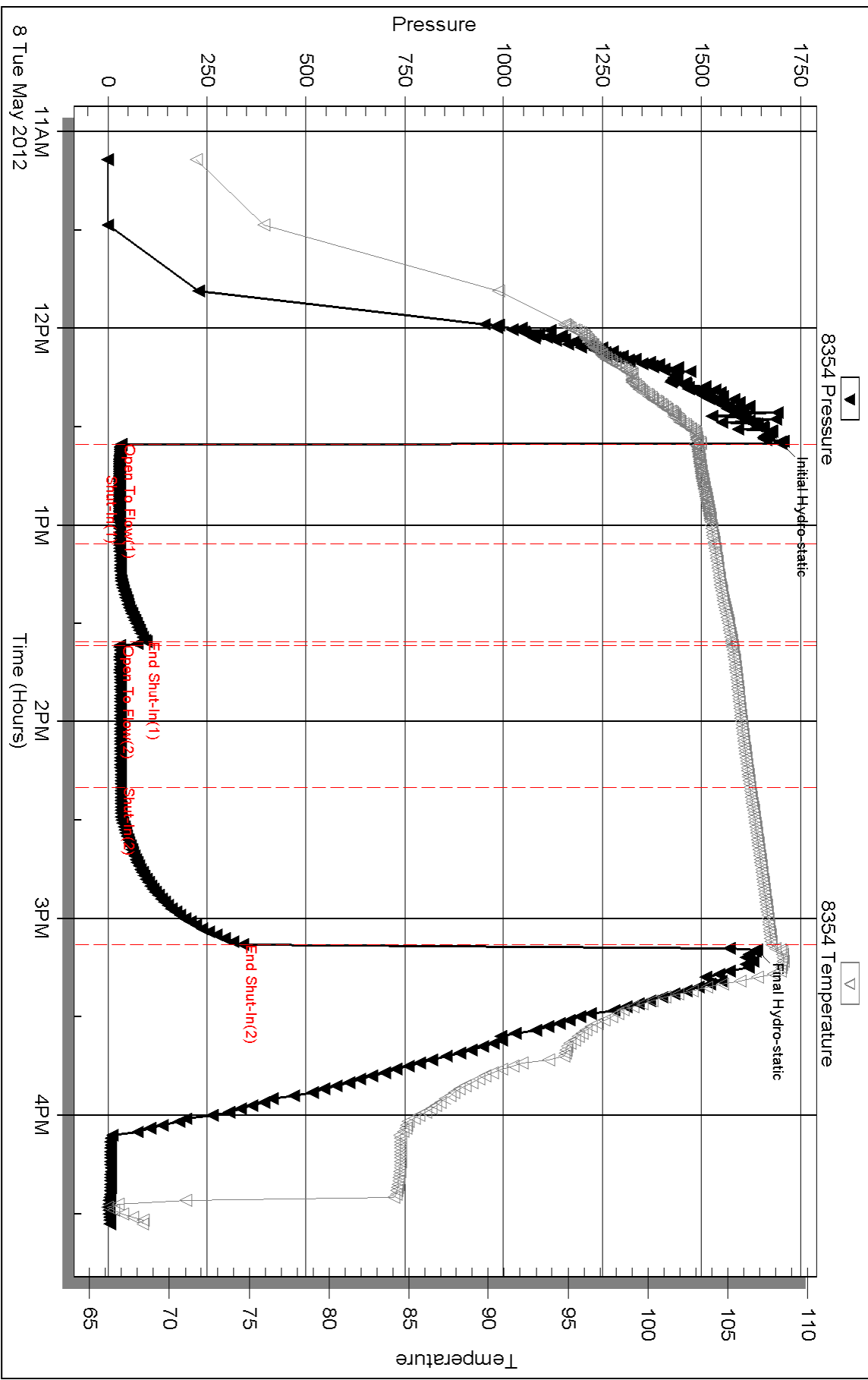
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

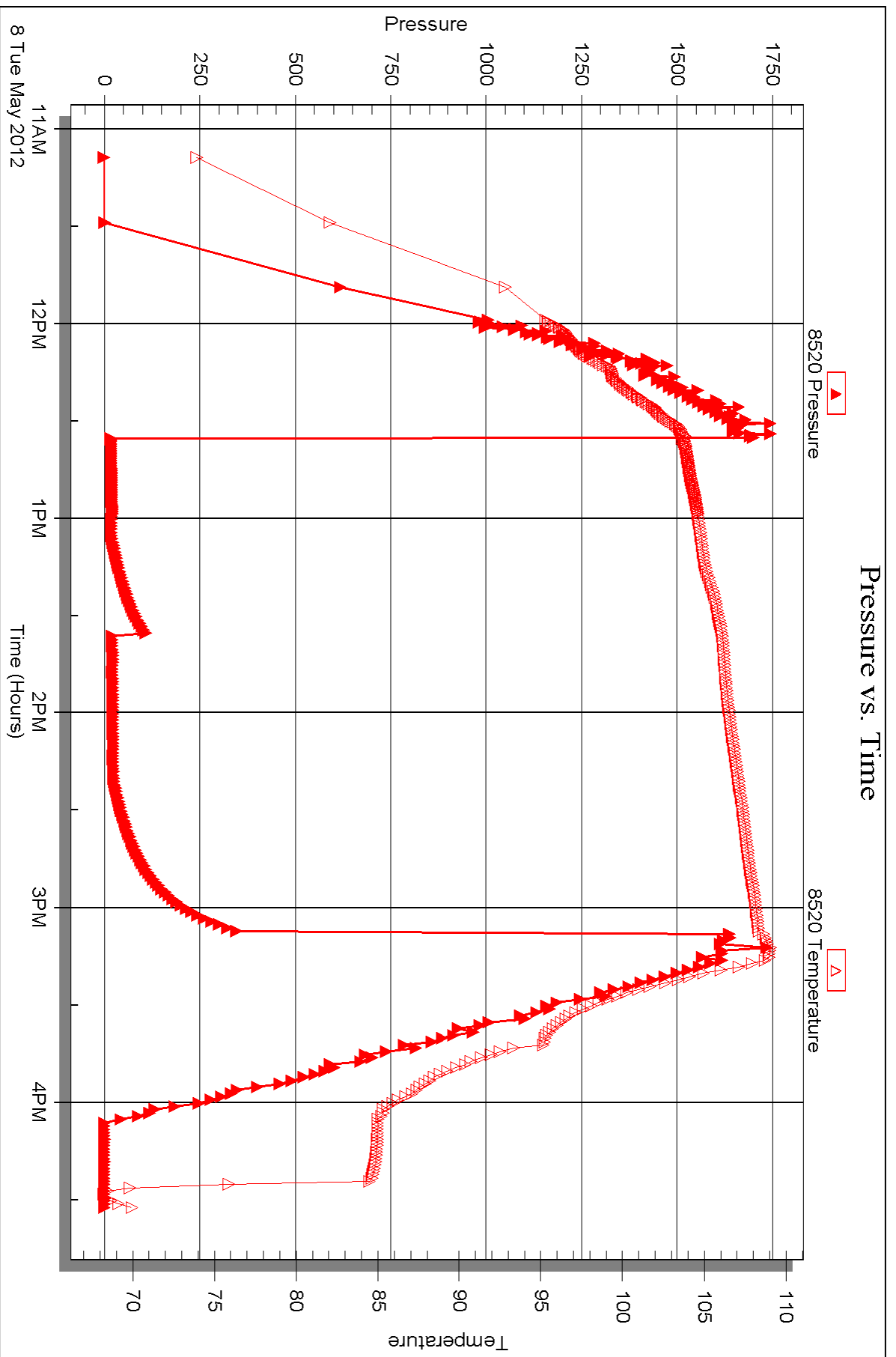


Serial #: 8520

Outside Dow nging-Nelson Oil Co., Inc.

Rita #1-18

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co., Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Rita #1-18

18-13s-18w Ellis,KS

Start Date: 2012.05.08 @ 23:06:30

End Date: 2012.05.09 @ 04:07:30

Job Ticket #: 47228 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.05.15 @ 08:58:19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47228

DST#: 2

ATTN: Marc Dow ning

Test Start: 2012.05.08 @ 23:06:30

GENERAL INFORMATION:

Formation: **LKC "E&F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:28:50

Time Test Ended: 04:07:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: 3532.00 ft (KB) To 3559.00 ft (KB) (TVD)

Reference Elevations: 2139.00 ft (KB)

Total Depth: 3559.00 ft (KB) (TVD)

2131.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8354

Inside

Press @RunDepth: 27.43 psig @ 3534.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.05.08

End Date:

2012.05.09

Last Calib.:

2012.05.09

Start Time: 23:16:30

End Time:

04:07:30

Time On Btm:

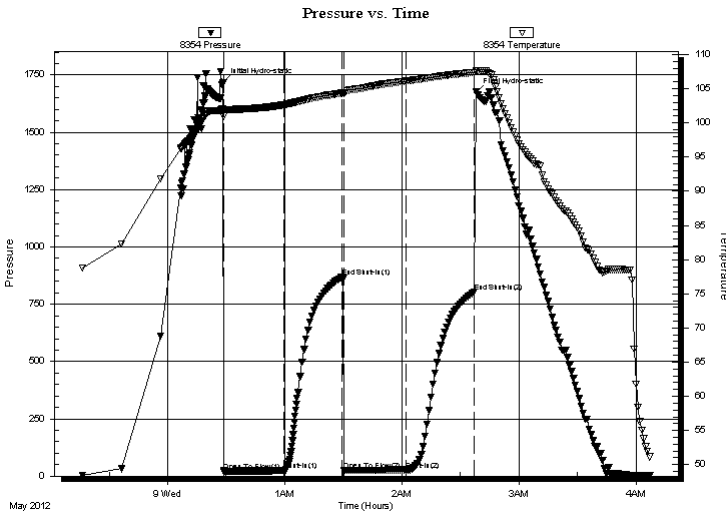
2012.05.09 @ 00:28:30

Time Off Btm:

2012.05.09 @ 02:38:00

TEST COMMENT: IF-Weak surface blow . Died @ 14 minutes.
IS- No Return.
FF-Weak surface blow . Died @ 4 minutes.
FS- No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1717.37	102.10	Initial Hydro-static
1	21.84	101.64	Open To Flow (1)
32	24.23	102.67	Shut-In(1)
61	868.61	104.37	End Shut-In(1)
62	25.11	104.33	Open To Flow (2)
94	27.43	106.12	Shut-In(2)
129	802.52	107.38	End Shut-In(2)
130	1674.84	107.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	100%Mud w/few oil specs	0.21

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47228

DST#: 2

ATTN: Marc Dow ning

Test Start: 2012.05.08 @ 23:06:30

Tool Information

Drill Pipe:	Length: 3519.00 ft	Diameter: 3.80 inches	Volume: 49.36 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	5000.00 lb
			<u>Total Volume: 49.36 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	3532.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	27.00 ft				
Tool Length:	47.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3513.00	
Shut In Tool	5.00			3518.00	
Hydraulic tool	5.00			3523.00	
Packer	5.00			3528.00	20.00 Bottom Of Top Packer
Packer	4.00			3532.00	
Stubb	1.00			3533.00	
Perforations	1.00			3534.00	
Recorder	0.00	8354	Inside	3534.00	
Recorder	0.00	8520	Outside	3534.00	
Perforations	22.00			3556.00	
Bullnose	3.00			3559.00	27.00 Bottom Packers & Anchor

Total Tool Length: 47.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47228

DST#: 2

ATTN: Marc Dow ning

Test Start: 2012.05.08 @ 23:06:30

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
15.00	100%Mud w /few oil specs	0.210

Total Length: 15.00 ft Total Volume: 0.210 bbl

Num Fluid Samples: 0

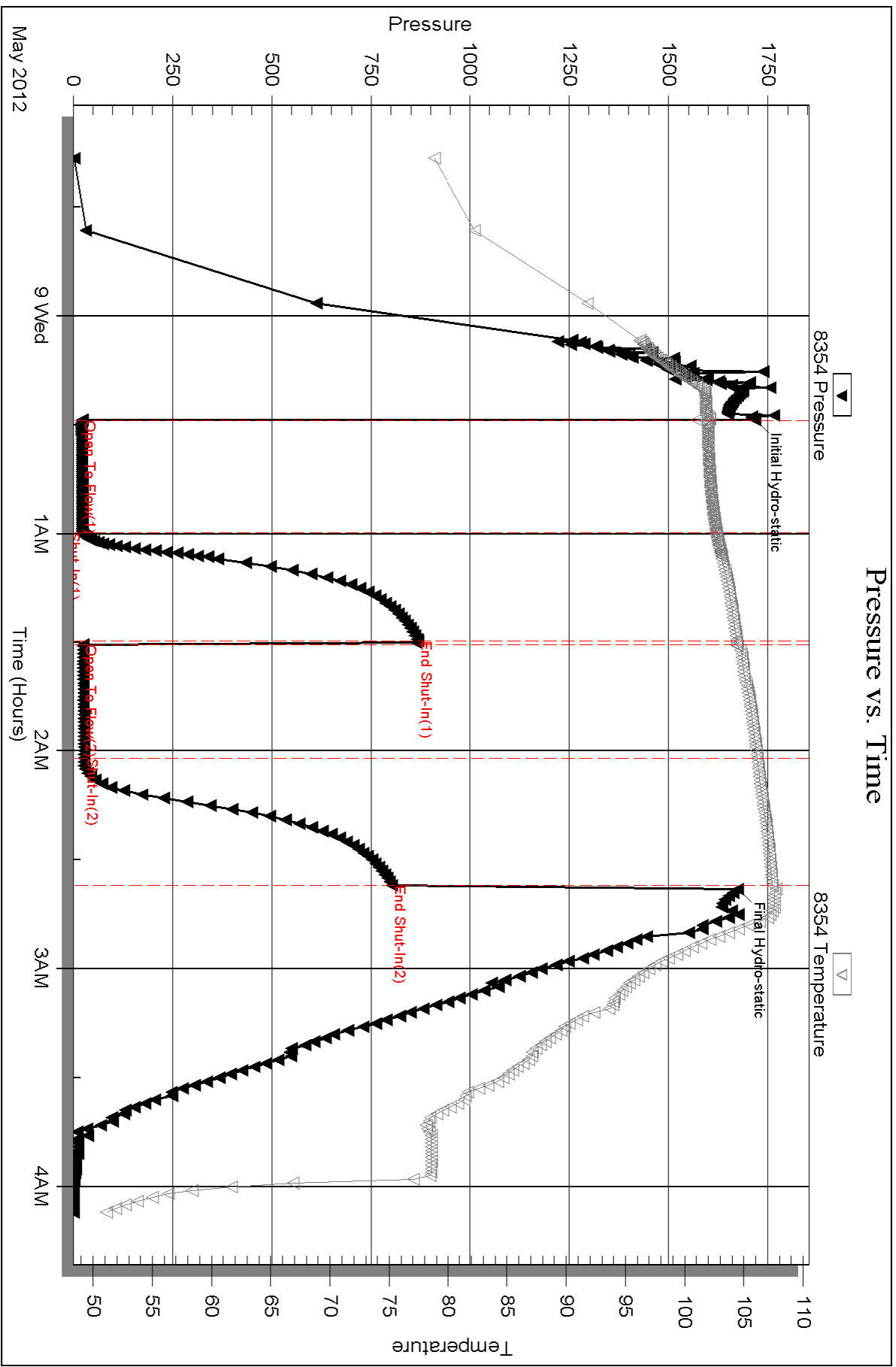
Num Gas Bombs: 0

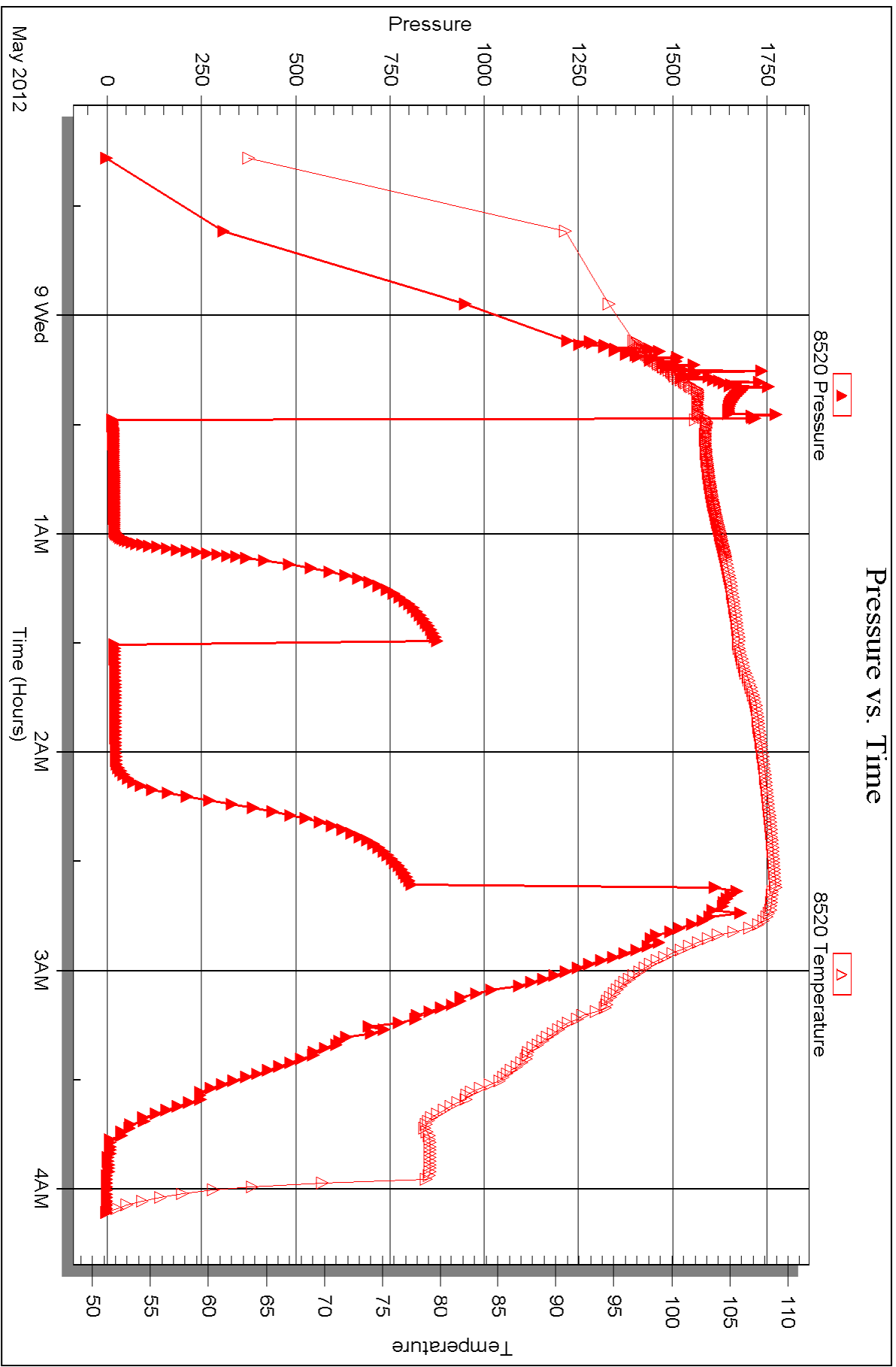
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co., Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Rita #1-18

18-13s-18w Ellis,KS

Start Date: 2012.05.09 @ 11:17:15

End Date: 2012.05.09 @ 17:50:15

Job Ticket #: 47229 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.05.15 @ 08:57:11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47229

DST#: 3

ATTN: Marc Dow ning

Test Start: 2012.05.09 @ 11:17:15

GENERAL INFORMATION:

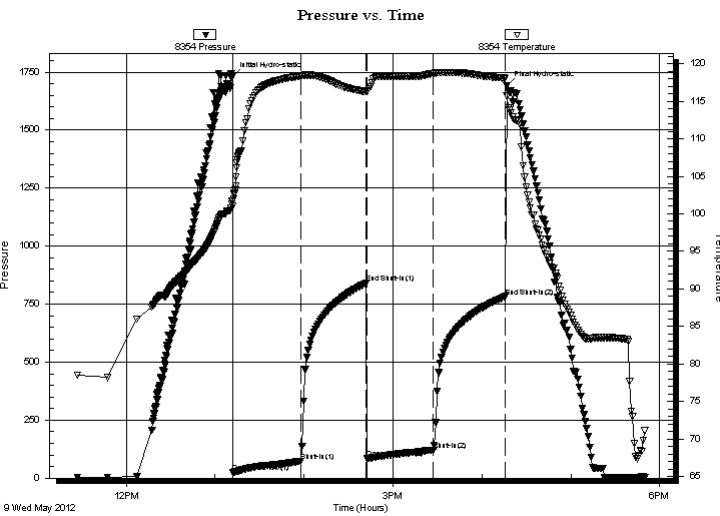
Formation: **LKC "G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:11:45
 Time Test Ended: 17:50:15
 Interval: **3563.00 ft (KB) To 3595.00 ft (KB) (TVD)**
 Total Depth: 3595.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Rash
 Unit No: 38
 Reference Elevations: 2139.00 ft (KB)
 2131.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8354

Inside

Press @ Run Depth: 120.86 psig @ 3565.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.05.09 End Date: 2012.05.09 Last Calib.: 2012.05.09
 Start Time: 11:27:15 End Time: 17:50:15 Time On Btm: 2012.05.09 @ 13:11:35
 Time Off Btm: 2012.05.09 @ 16:16:45

TEST COMMENT: IF-Weak building blow . BOB in 26 minutes.
 IS-No Return.
 FF-Very weak building blow . BOB in 43 minutes 30 seconds.
 FS-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1730.04	101.74	Initial Hydro-static
1	24.08	100.98	Open To Flow (1)
47	73.19	118.34	Shut-In(1)
91	839.34	116.26	End Shut-In(1)
92	83.67	116.35	Open To Flow (2)
136	120.86	118.68	Shut-In(2)
185	782.61	118.03	End Shut-In(2)
186	1692.46	115.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
290.00	90%Water/10%Mud	4.07

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47229

DST#: 3

ATTN: Marc Dow ning

Test Start: 2012.05.09 @ 11:17:15

Tool Information

Drill Pipe:	Length: 3550.00 ft	Diameter: 3.80 inches	Volume: 49.80 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 27000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 5000.00 lb
			<u>Total Volume: 49.80 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3563.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	32.00 ft			
Tool Length:	52.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3544.00	
Shut In Tool	5.00			3549.00	
Hydraulic tool	5.00			3554.00	
Packer	5.00			3559.00	20.00 Bottom Of Top Packer
Packer	4.00			3563.00	
Stubb	1.00			3564.00	
Perforations	1.00			3565.00	
Recorder	0.00	8354	Inside	3565.00	
Recorder	0.00	8520	Outside	3565.00	
Perforations	27.00			3592.00	
Bullnose	3.00			3595.00	32.00 Bottom Packers & Anchor

Total Tool Length: 52.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47229

DST#: 3

ATTN: Marc Dow ning

Test Start: 2012.05.09 @ 11:17:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

52000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.96 in³

Gas Cushion Type:

Resistivity: 0.11 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
290.00	90%Water/10%Mud	4.068

Total Length: 290.00 ft Total Volume: 4.068 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

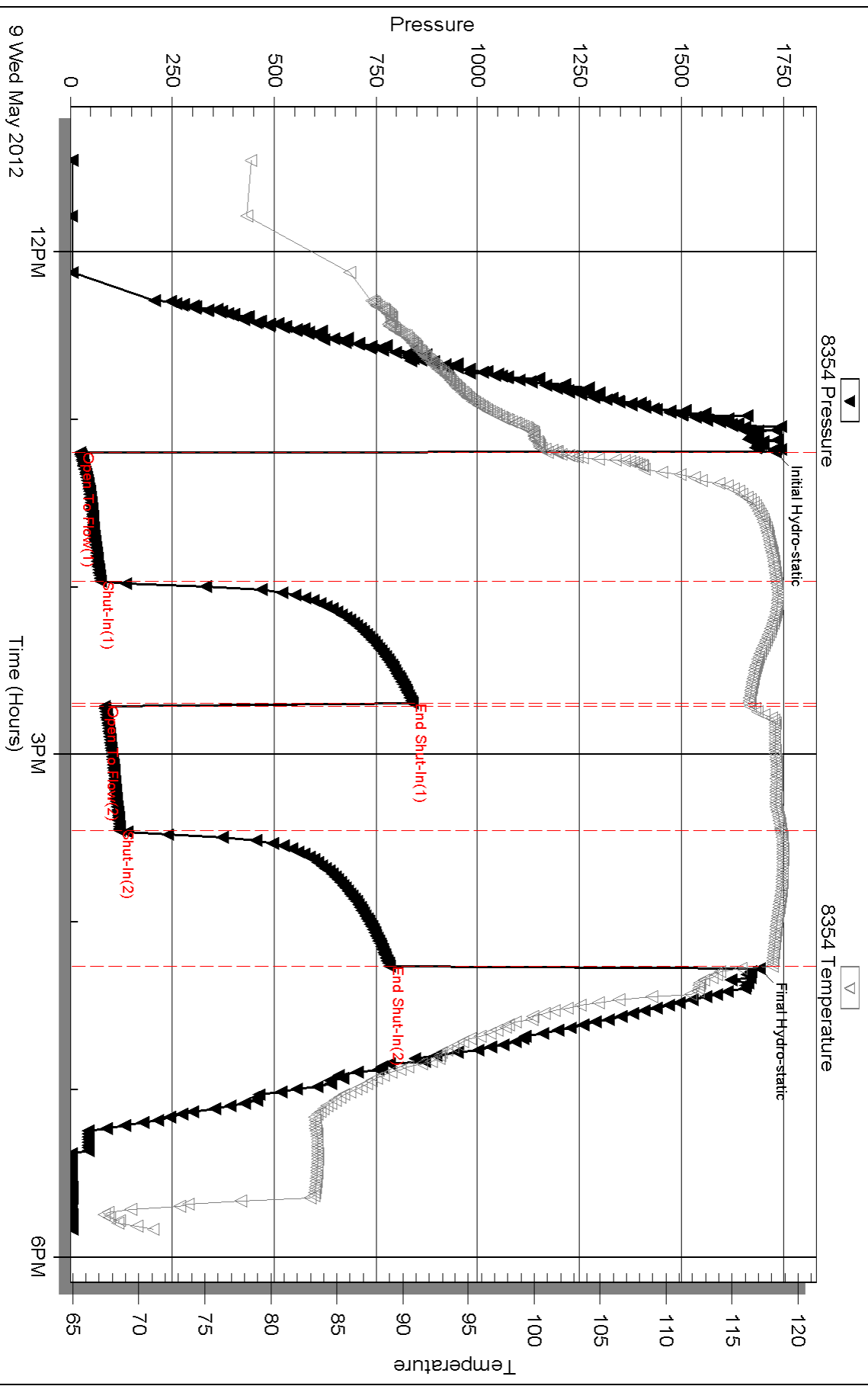
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

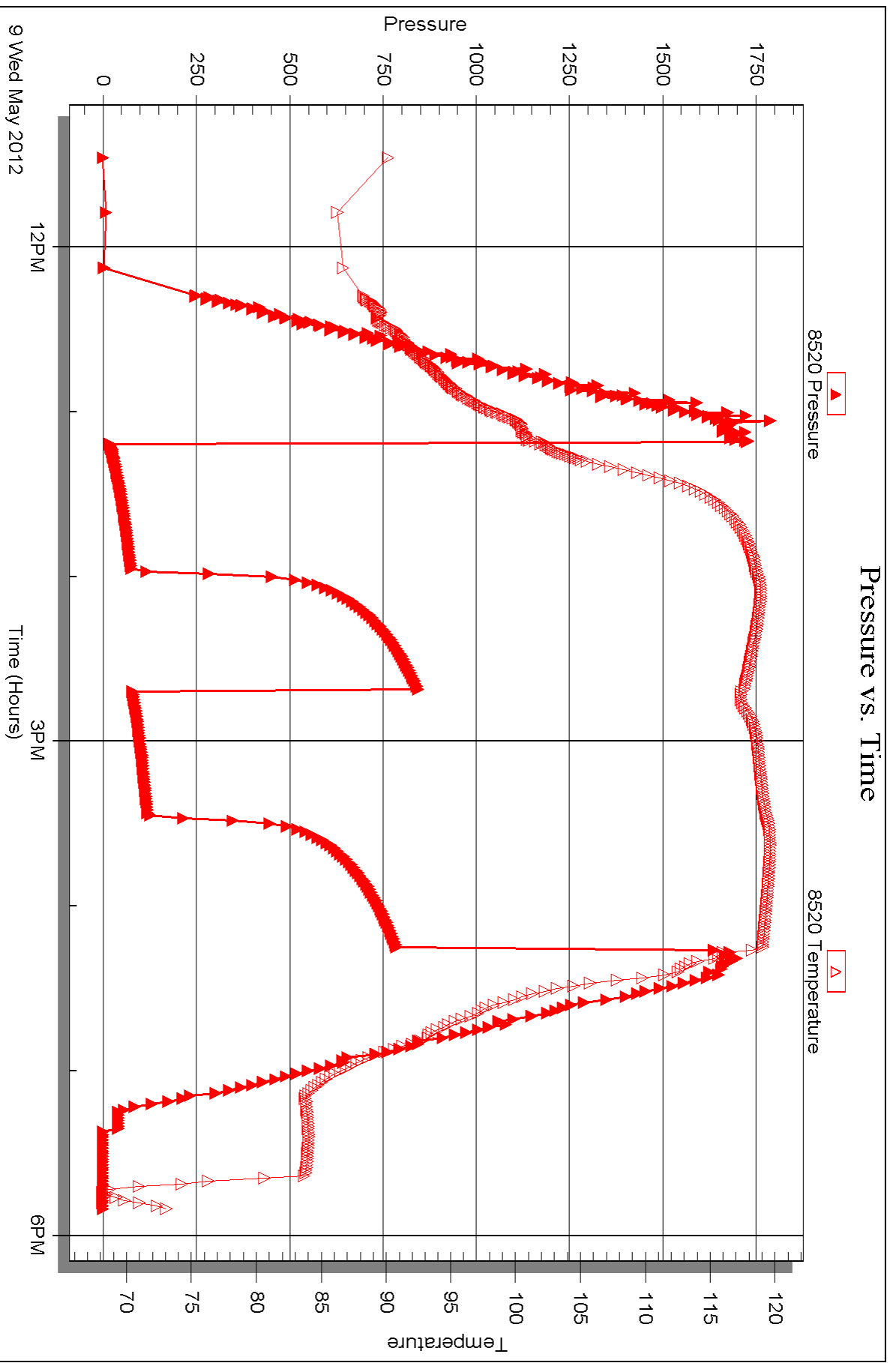


Serial #: 8520

Outside Dow nting-Nelson Oil Co., Inc.

Rita #1-18

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co., Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Rita #1-18

18-13s-18w Ellis,KS

Start Date: 2012.05.10 @ 03:05:15

End Date: 2012.05.10 @ 09:33:15

Job Ticket #: 47230 DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.05.15 @ 08:56:34



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47230

DST#: 4

ATTN: Marc Dow ning

Test Start: 2012.05.10 @ 03:05:15

GENERAL INFORMATION:

Formation: **LKC "H-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:48:45

Time Test Ended: 09:33:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: 3590.00 ft (KB) To 3654.00 ft (KB) (TVD)

Reference Elevations: 2139.00 ft (KB)

Total Depth: 3654.00 ft (KB) (TVD)

2131.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8354

Inside

Press @ Run Depth: 69.98 psig @ 3630.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.05.10

End Date:

2012.05.10

Last Calib.:

2012.05.10

Start Time: 03:15:15

End Time:

09:33:15

Time On Btm:

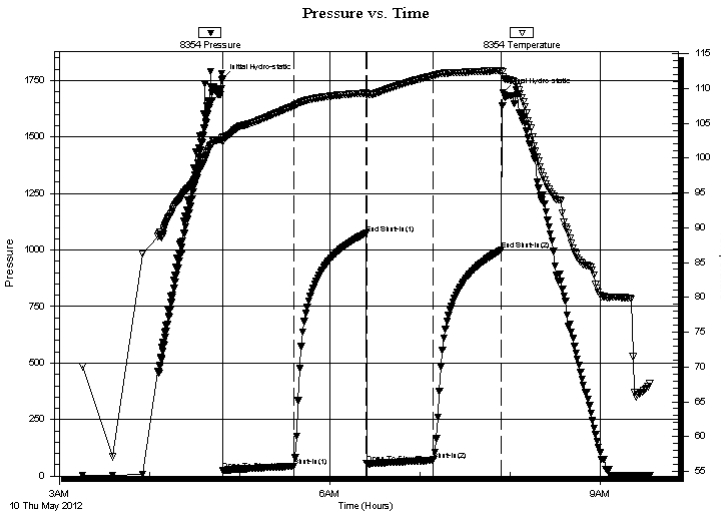
2012.05.10 @ 04:48:35

Time Off Btm:

2012.05.10 @ 07:55:15

TEST COMMENT: IF-Very weak building blow . Built to 5&1/2 inches.
IS-No Return.
FF-Very weak building blow . Built to 4&1/4 inches.
FS-No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1757.51	103.13	Initial Hydro-static
1	26.18	102.35	Open To Flow (1)
48	43.75	107.51	Shut-In(1)
96	1073.23	109.35	End Shut-In(1)
96	55.16	109.03	Open To Flow (2)
140	69.98	111.82	Shut-In(2)
186	999.03	112.59	End Shut-In(2)
187	1696.05	111.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
115.00	80%Water/20%Mud	1.61

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47230

DST#: 4

ATTN: Marc Dow ning

Test Start: 2012.05.10 @ 03:05:15

Tool Information

Drill Pipe:	Length: 3581.00 ft	Diameter: 3.80 inches	Volume: 50.23 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 26000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 5000.00 lb
			<u>Total Volume: 50.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3590.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	64.00 ft			
Tool Length:	84.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3571.00	
Shut In Tool	5.00			3576.00	
Hydraulic tool	5.00			3581.00	
Packer	5.00			3586.00	20.00 Bottom Of Top Packer
Packer	4.00			3590.00	
Stubb	1.00			3591.00	
Perforations	5.00			3596.00	
Change Over Sub	1.00			3597.00	
Drill Pipe	32.00			3629.00	
Change Over Sub	1.00			3630.00	
Recorder	0.00	8354	Inside	3630.00	
Recorder	0.00	8520	Outside	3630.00	
Perforations	21.00			3651.00	
Bullnose	3.00			3654.00	64.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47230

DST#: 4

ATTN: Marc Dow ning

Test Start: 2012.05.10 @ 03:05:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

36000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: 0.18 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
115.00	80%Water/20%Mud	1.613

Total Length: 115.00 ft Total Volume: 1.613 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

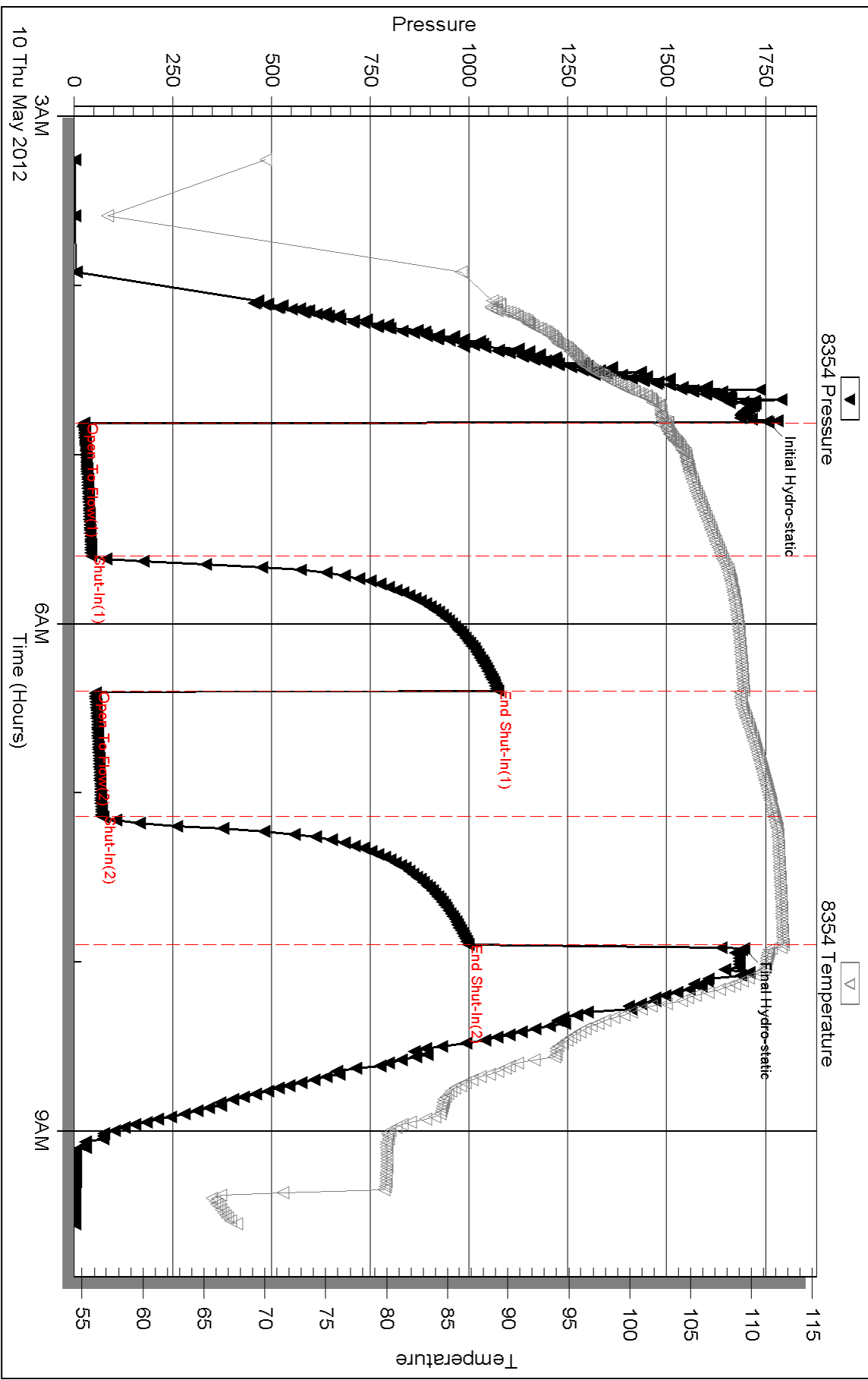
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

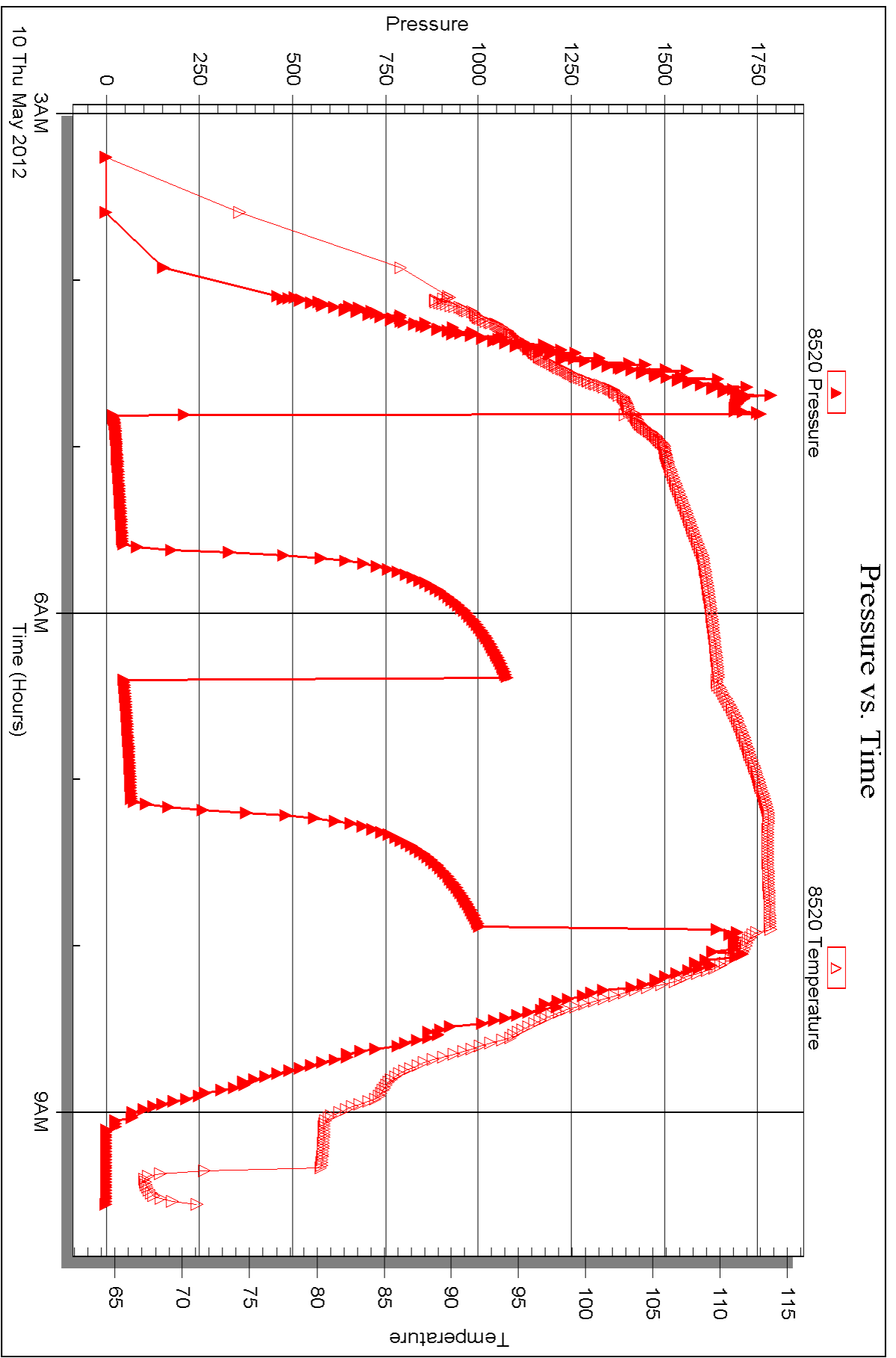


Serial #: 8520

Outside Dow nung-Nelson Oil Co., Inc.

Rita #1-18

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co., Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Rita #1-18

18-13s-18w Ellis,KS

Start Date: 2012.05.11 @ 06:22:15

End Date: 2012.05.11 @ 12:10:45

Job Ticket #: 47231 DST #: 5

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.05.15 @ 08:55:47



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47231

DST#: 5

ATTN: Marc Dow ning

Test Start: 2012.05.11 @ 06:22:15

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:46:05

Time Test Ended: 12:10:45

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: 3741.00 ft (KB) To 3778.00 ft (KB) (TVD)

Total Depth: 3850.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2139.00 ft (KB)

2131.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8354 Inside

Press @RunDepth: 23.84 psig @ 3742.00 ft (KB)

Start Date: 2012.05.11

End Date: 2012.05.11

Start Time: 06:32:15

End Time: 12:10:45

Capacity: 8000.00 psig

Last Calib.: 2012.05.11

Time On Btm: 2012.05.11 @ 07:45:45

Time Off Btm: 2012.05.11 @ 10:21:45

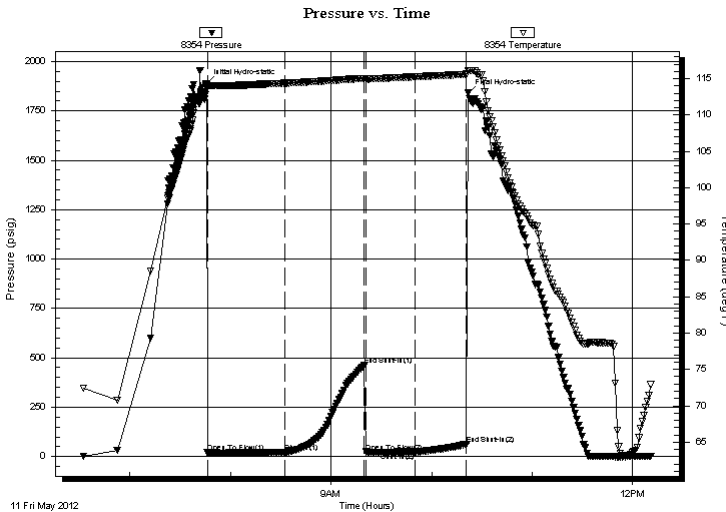
TEST COMMENT: IF-Very weak but building blow . Built to 2&1/2 inches. Died to 1&1/2 inches.

ISI-No Return.

FF-No Blow .

FSI-No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1887.19	114.24	Initial Hydro-static
1	19.56	113.79	Open To Flow (1)
47	21.36	114.38	Shut-In(1)
94	463.17	115.05	End Shut-In(1)
95	23.95	114.98	Open To Flow (2)
125	23.84	115.27	Shut-In(2)
155	63.25	115.61	End Shut-In(2)
156	1839.68	116.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
12.00	10%Oil/90%Mud	0.17
8.00	10%Gas/90%Oil	0.11

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47231

DST#: 5

ATTN: Marc Dow ning

Test Start: 2012.05.11 @ 06:22:15

Tool Information

Drill Pipe:	Length: 3741.00 ft	Diameter: 3.80 inches	Volume: 52.48 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	28000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	5000.00 lb
			<u>Total Volume: 52.48 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	3741.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	3778.00 ft				
Interval betw een Packers:	37.00 ft				
Tool Length:	131.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3722.00	
Shut In Tool	5.00			3727.00	
Hydraulic tool	5.00			3732.00	
Packer	5.00			3737.00	20.00 Bottom Of Top Packer
Packer	4.00			3741.00	
Stubb	1.00			3742.00	
Recorder	0.00	8354	Inside	3742.00	
Recorder	0.00	8520	Outside	3742.00	
Perforations	32.00			3774.00	
Blank Off Sub	1.00			3775.00	
Blank Spacing	3.00			3778.00	37.00 Tool Interval
Packer	2.00			3780.00	
Stubb	1.00			3781.00	
Perforations	1.00			3782.00	
Change Over Sub	1.00			3783.00	
Recorder	0.00	8653	Below	3783.00	
Drill Pipe	63.00			3846.00	
Change Over Sub	1.00			3847.00	
Perforations	2.00			3849.00	
Bullnose	3.00			3852.00	74.00 Bottom Packers & Anchor

Total Tool Length: 131.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

18-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Rita #1-18

Job Ticket: 47231

DST#: 5

ATTN: Marc Dow ning

Test Start: 2012.05.11 @ 06:22:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
12.00	10%Oil/90%Mud	0.168
8.00	10%Gas/90%Oil	0.112

Total Length: 20.00 ft Total Volume: 0.280 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8354

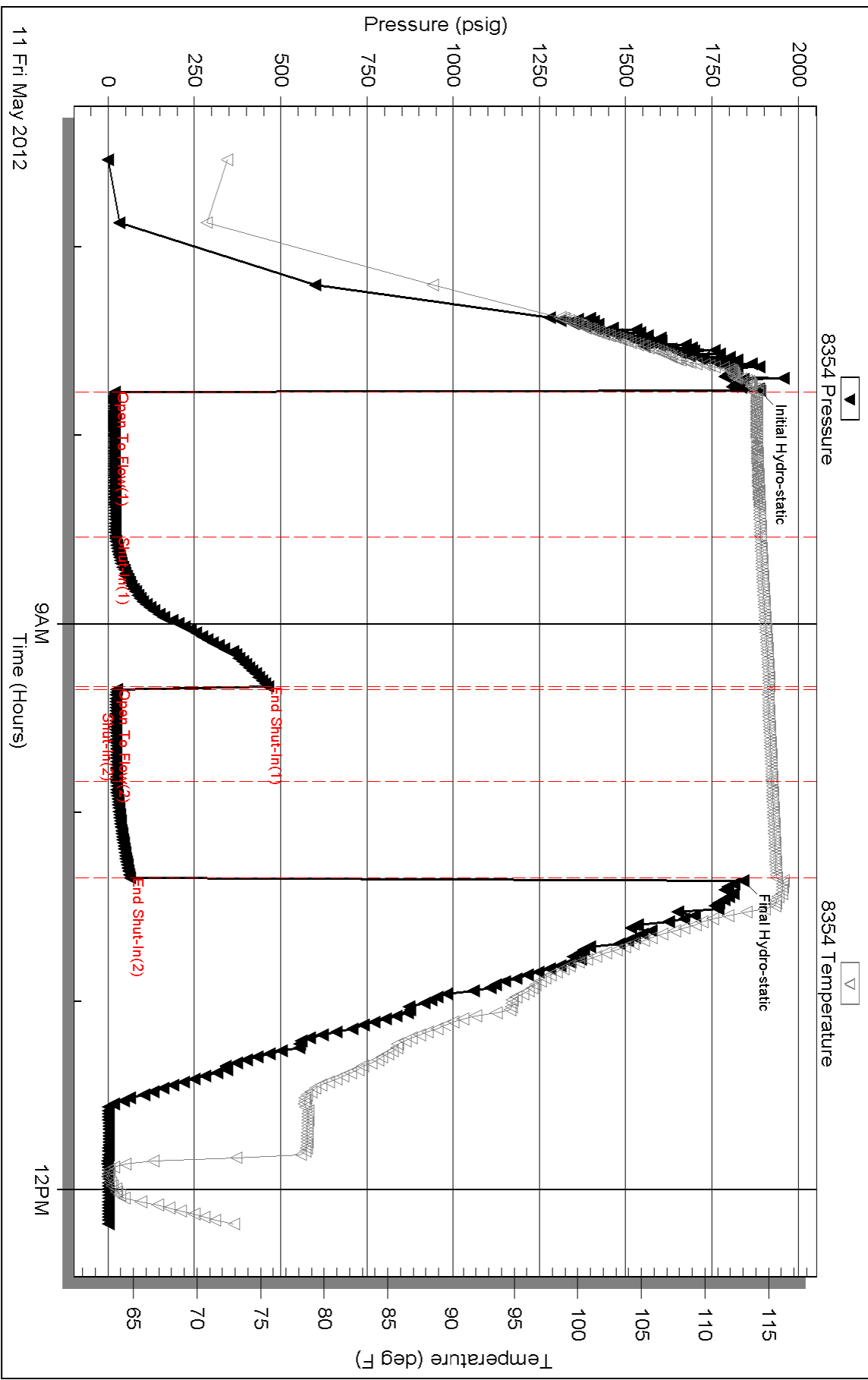
Inside

Dow nging-Nelson Oil Co., Inc.

Rita #1-18

DST Test Number: 5

Pressure vs. Time

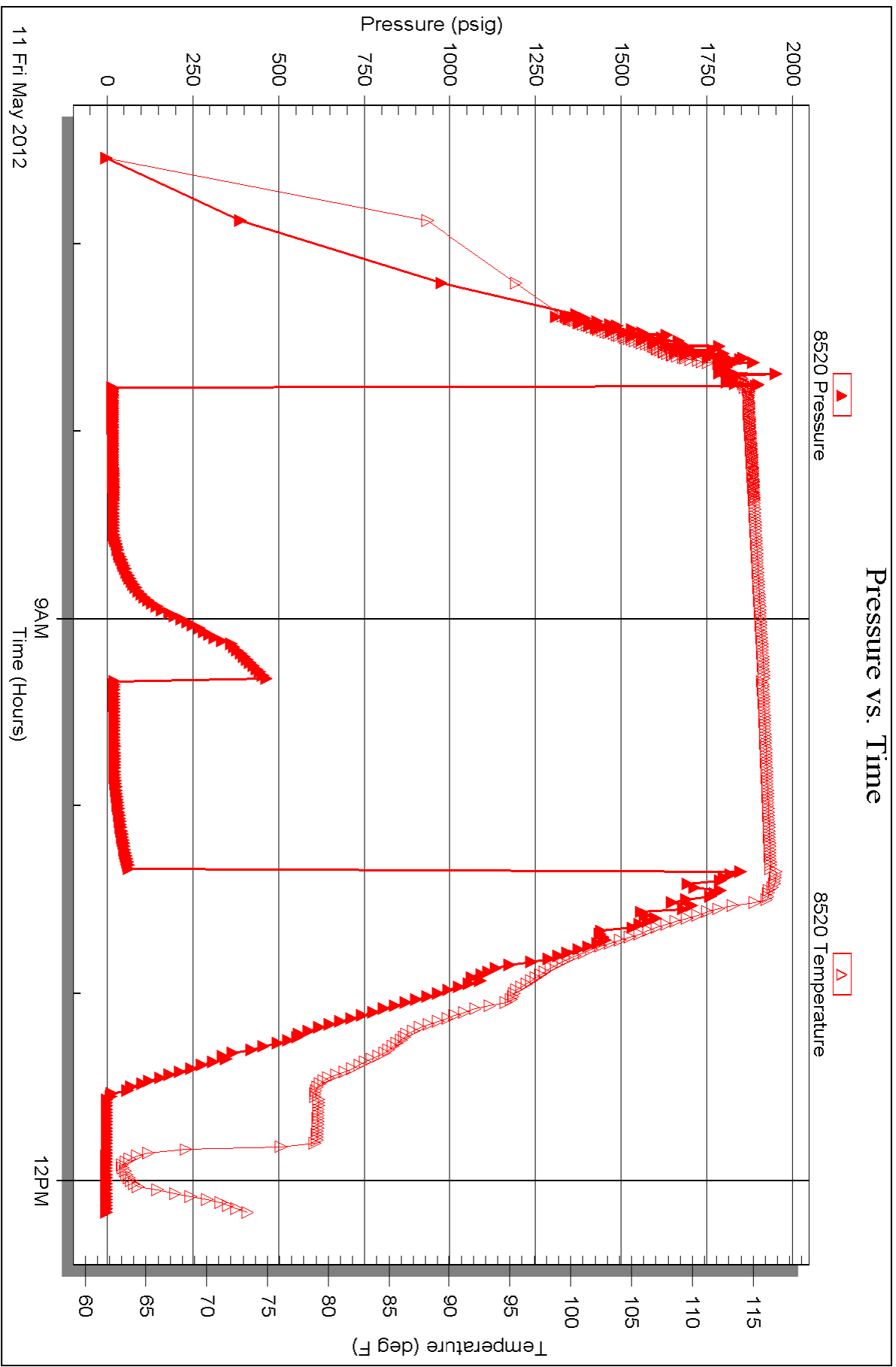


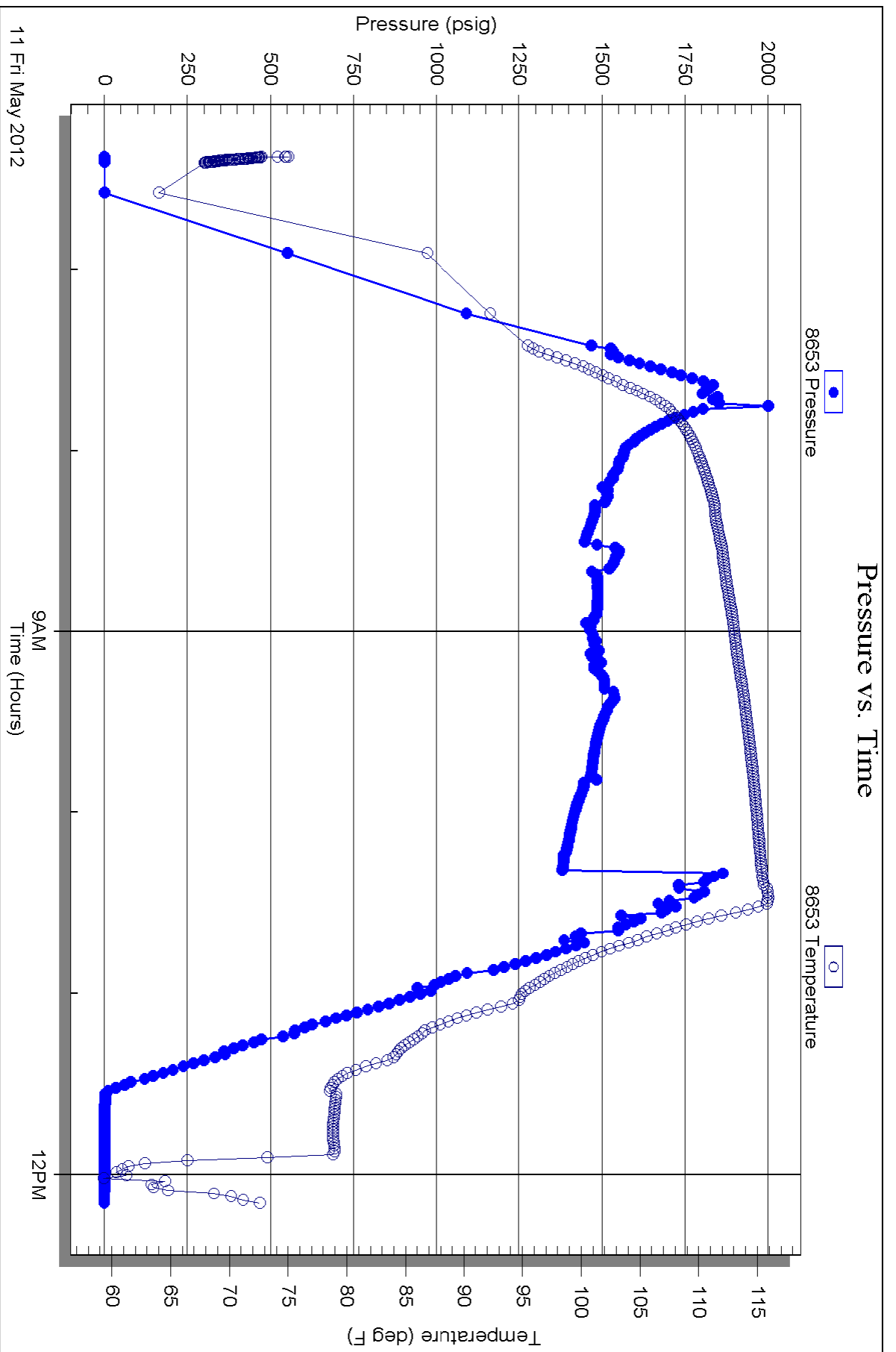
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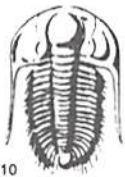
Outside Dow nting-Nelson Oil Co., Inc.

Rita #1-18

DST Test Number: 5







TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47227

Well Name & No. Rita #1-18 Test No. 7 Date 5-8-12
 Company Downing-Nelson Oil Co., Inc. Elevation 2139 KB 2131 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Maac Downing Rig Discovery 3
 Location: Sec. 18 Twp. 13S Rge. 18W Co. Ellis State KS

Interval Tested 3488-3536 Zone Tested LKC "C#D"
 Anchor Length 48' Drill Pipe Run 3486 Mud Wt. 8.8
 Top Packer Depth 3483 Drill Collars Run 0 Vis 51
 Bottom Packer Depth 3488 Wt. Pipe Run 0 WL 8.8
 Total Depth 3536 Chlorides 2000 ppm System LCM 2#

Blow Description IF - Weak surface blow @ 18 minutes. Built to 1 1/2 inches.
IST - No Return.
FF - Weak building blow. Built to 8 inches.
FST - No Return.

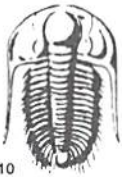
Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>OCM</u>	<u>15</u>		<u>85</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30 BHT Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1700 Test 1150 T-On Location 1015
 (B) First Initial Flow 34 Jars T-Started 1100
 (C) First Final Flow 29 Safety Joint T-Open 1235
 (D) Initial Shut-In 96 Circ Sub T-Pulled 1505
 (E) Second Initial Flow 29 Hourly Standby T-Out 1630
 (F) Second Final Flow 32 Mileage 5X2 15.50 Comments BATT-1058
 (G) Final Shut-In 340 Sampler
 (H) Final Hydrostatic 1639 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1165.50
 Accessibility MP/DST Disc't
 Sub Total 1165.50

Approved By _____ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47228

Well Name & No. Rita #1-18 Test No. 2 Date 5-8-12
 Company Downing-Nelson Oil Co., Inc. Elevation 2139 KB 2131 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Maic Downing Rig Discovery 3
 Location: Sec. 18 Twp. 13S Rge. 18W Co. Ellis State KS

Interval Tested 3532-3559 Zone Tested LKC "E+F"
 Anchor Length 27' Drill Pipe Run 3519 Mud Wt. 8.8
 Top Packer Depth 3527 Drill Collars Run 0 Vis 51
 Bottom Packer Depth 3532 Wt. Pipe Run 0 WL 8.8
 Total Depth ~~3532~~ 3559 Chlorides 2000 ppm System LCM 2#

Blow Description IF-Weak surface blow, Dried @ 14 minutes,
FST- No Return,
FF-Weak surface blow, Dried @ 4 minutes,
FST- No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud w/Few oil specks</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT 108 Gravity 1150 API RW @ 1150 °F Chlorides 2000 ppm

(A) Initial Hydrostatic 1717 Test 1150 T-On Location 2230
 (B) First Initial Flow 22 Jars T-Started 2315
 (C) First Final Flow 24 Safety Joint T-Open 0029
 (D) Initial Shut-In 869 Circ Sub T-Pulled 0235
 (E) Second Initial Flow 25 Hourly Standby T-Out 0400
 (F) Second Final Flow 27 Mileage 5X2 15.50 Comments Bar 2306
 (G) Final Shut-In 803 Sampler
 (H) Final Hydrostatic 1675 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1165.50
 Accessibility MP/DST Disc't
 Sub Total 1165.50

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47229

Well Name & No. Rita #118 Test No. 3 Date 5-9-12
 Company Downing-Nelson Oil Co., Inc. Elevation 2139 KB 2131 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Malc Downing Rig Discovery 3
 Location: Sec. 18 Twp. 13S Rge. 18W Co. Ellis State KS

Interval Tested 3563-3595 Zone Tested LKC "G"
 Anchor Length 32' Drill Pipe Run 3550 Mud Wt. 9.0
 Top Packer Depth 3558 Drill Collars Run 0 Vis 56
 Bottom Packer Depth 3563 Wt. Pipe Run 0 WL 8.0
 Total Depth 3595 Chlorides 3500 ppm System LCM 2#

Blow Description IF-Weak building blow, BOB in 26 minutes,
ISF- No Return,
FF-Very weak building blow, BOB in 43 minutes 30 seconds,
FST- No Return,

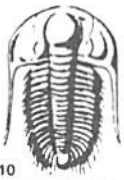
Rec	Feet of	%gas	%oil	%water	%mud
<u>290</u>	<u>Muddy water</u>			<u>90</u>	<u>10</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 290 BHT 119 Gravity API RW 114 @ 88° F Chlorides 52000 ppm
 (A) Initial Hydrostatic 1730 Test 1150 T-On Location 1045
 (B) First Initial Flow 24 Jars T-Started 1130
 (C) First Final Flow 73 Safety Joint T-Open 1312
 (D) Initial Shut-In 839 Circ Sub T-Pulled 1615
 (E) Second Initial Flow 84 Hourly Standby T-Out 1750
 (F) Second Final Flow 121 Mileage 5X2 15.50 Comments BATT-1117
 (G) Final Shut-In 783 Sampler
 (H) Final Hydrostatic 1692 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies

Initial Open 45
 Initial Shut-In 4.5
 Final Flow 45
 Final Shut-In 45
 Sub Total 1165.50
 Total 1165.50
 MP/DST Disc't

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47230

Well Name & No. Rita #1-18 Test No. 4 Date 5-10-12
 Company Downing-Nelson Oil Co., Inc. Elevation 2139 KB 2131 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery 3
 Location: Sec. 18 Twp. 13S Rge. 18W Co. Ellis State KS

Interval Tested 3590-3654 Zone Tested LKC "H-J"
 Anchor Length 64' Drill Pipe Run 3581 Mud Wt. 9.0
 Top Packer Depth 3585 Drill Collars Run 0 Vis 56
 Bottom Packer Depth 3590 Wt. Pipe Run 0 WL 8.0
 Total Depth 3654 Chlorides 3500 ppm System LCM 2#

Blow Description IF - Very weak building blow, Built to 5 1/2 inches,
IST - No Return,
FF - Very weak building blow, Built to 4 1/4 inches,
FST - No Return.

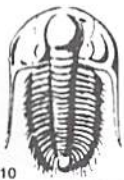
Rec	Feet of	%gas	%oil	%water	%mud
<u>115</u>	<u>Muddy Water</u>			<u>80%</u>	<u>20%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 115 BHT 113 Gravity API RW .180 @ 77 °F Chlorides 36,000 ppm

(A) Initial Hydrostatic 1758 Test 1150 T-On Location 0215
 (B) First Initial Flow 26 Jars _____ T-Started 0315
 (C) First Final Flow 44 Safety Joint _____ T-Open 0450
 (D) Initial Shut-In 1073 Circ Sub _____ T-Pulled 0750
 (E) Second Initial Flow 55 Hourly Standby _____ T-Out 0930
 (F) Second Final Flow 70 Mileage 5X2 15.50 Comments BHT-0.305
 (G) Final Shut-In 999 Sampler _____
 (H) Final Hydrostatic 1696 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 45 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1165.50
 Final Flow 45 Accessibility _____ MP/DST Disc _____
 Final Shut-In 45 Sub Total 1165.50

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47231

Well Name & No. Rita # 1-18 Test No. 5 Date 5-11-12
 Company Downing-Nelson Oil Co, Inc. Elevation 2139 KB 2131 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Male Downing Rig Discovery 3
 Location: Sec. 18 Twp. 13S Rge. 18W Co. Ellis State KS

Interval Tested 3741-3778 Zone Tested Aubuckle
 Anchor Length 37' 72' TP Drill Pipe Run 3741 Mud Wt. 8.9
 Top Packer Depth 3736 Drill Collars Run 0 Vis 50
 Bottom Packer Depth 3741 Wt. Pipe Run 0 WL 8.8
 Total Depth 3850 Chlorides 4000 ppm System LCM 1 1/2 #

Blow Description IF - Very weak but building blow. Built to 2 1/2 inches. Died to 1 1/2 inches.
ISI - No Return.
FF - No Blow.
FBI - No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>08</u>	<u>Gassy Oil</u>	<u>10</u>	<u>90</u>		
<u>12</u>	<u>OCM</u>		<u>10</u>		<u>90</u>

Rec Total 20 BHT _____ Gravity 28 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1887 Test 1150 T-On Location 0445
 (B) First Initial Flow 20 Jars _____ T-Started 0630
 (C) First Final Flow 21 Safety Joint _____ T-Open 0746
 (D) Initial Shut-In 463 Circ Sub _____ T-Pulled 1020
 (E) Second Initial Flow 24 Hourly Standby _____ T-Out 1215
 (F) Second Final Flow 24 Mileage 5X2 15.50 Comments BATT-0622
 (G) Final Shut-In 63 Sampler _____
 (H) Final Hydrostatic 1840 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1765.50
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1765.50

Approved By _____ Our Representative D. Rash

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